Special Conditions

Permit Number 20178

Emission Limitations

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in the table. In addition, this permit authorizes all emissions from planned startup and shutdown activities or groups of activities that are authorized by this permit.

2. The following facilities are authorized by the listed Permits by Rule (PBR) in 30 Texas Administrative Code (TAC) Chapter 106:

Table 1: Referenced Permits by Rule

Facility	PBR No.
Landfill Remediation (PBR Registration Nos. 28912 and 37279)	§106.262
Emergency Generators (1, 6E, EO, Building 3, and 6W)	§106.511
Comfort Heaters	§106.102
Air Conditioning and Ventilation System	§106.103
Food Preparation	§106.242
Ovens, Barbecue Pits, and Cookers	§106.244
Industrial Gas Storage	§106.372

Fuel Specifications

3. Fuel for the abator heaters (EPN 6-170 and 6-171) shall be pipeline quality sweet natural gas with a maximum sulfur content of no more than 0.0015 percent by weight. Fuel for the boilers (EPN 6-65, 6-31, B-43, and B-44) shall be pipeline-quality sweet natural gas or liquid fuel with a maximum sulfur content of no more than 0.0015 percent by weight and shall not consist of a blend containing waste oils or solvents. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).

4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel(s) used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

Federal Applicability

5. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories promulgated in 40 CFR Part 63, specifically the following:

Subpart A - General Provisions and

Subpart O – Ethylene Oxide Emissions Standards for Sterilization Facilities.

Operational Limitations, Work Practices, and Plant Design

6. Ethylene oxide (EtO) usage is limited to a maximum of 200,000 pounds per year.

7. Natural gas usage for each abator heater is limited to 4,000 standard cubic feet (scf) of natural gas per hour.

8. Facilities authorized by this permit are limited to 8,568 hours per year (based on 24 hours per day, 7 days per week, and 51 weeks per year) except for those facilities listed below:

Table 2: Facilities with Limited Operating Hours

EPN	Facility	Maximum Annual Operating Hours
1-217	Tool and Die Shop	2,080
1-25	Silicone Mixing Room	6,336
2-1	Abrasive Blast Cleaning	2,112
1-220	Project Vapor Facility	6,000

9. As represented by the applicant, the following will occur:

   A. Sterilant gas usage shall be 100 percent EtO in sterilizers SS-1, SS-2, SS-3, SP-1, SP-2, and SP-3 (EPN 6-154, 6-139, 6-75, 6-125, 6-96, and 6-87).

   B. The sterilizers, makeup tanks, or process piping will not be allowed to vent directly to atmosphere.

   C. The holder of this permit shall sample, analyze, and record once per week the EtO scrubber solution pH. The EtO scrubber solution pH shall be maintained less than or equal to 1.0. Monitoring is required only when a scrubber tank is in operation.

   D. Process gases will be stored in such a manner as to prevent damage to the storage container and release of uncontrolled emissions.

   E. All air pollution abatement equipment will be properly maintained and operated during the operation of these facilities. Cleaning and maintenance of the abatement equipment will be performed as recommended by the manufacturer and/or as specified in the facility standard operating procedures consistent with good engineering practice and as necessary so that the equipment efficiency can be adequately maintained.

   F. All hooding, duct, and collection systems will be effective in capturing emissions from this equipment and in minimizing fugitive emissions from the buildings. The hooding and duct systems will be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.

G. Piping, Valves, Flanges, and Pumps in EtO Service

(1) All piping, valves, flanges, and pumps associated with the process sterilizer trains, which have the potential to leak, shall be enclosed in rooms referred to as the Damage Limiting Construction (DLC) zones. The DLC zones include the Sterilizer DLC zones, the Scrubber DLC zones, and the EtO Dispensing (ED) facility suites. The DLC zones shall be continuously monitored for EtO emissions using an approved gas chromatograph analyzer and alarm system. If an alarm sounds and indicates a reading exceeding 200 parts per million EtO from the gas chromatograph analyzer inside a DLC zone, an investigation shall be conducted to determine if the alarm resulted from a leaking component. If the investigation identifies a leaking component, every reasonable effort shall be made to repair or replace it at the conclusion of the in-process cycle.

(2) Supply piping from the ED building to the DLC zones shall be welded.

(3) Valves and flanges outside of the DLC zones that are enclosed and/or insulated for process reasons shall be considered non-accessible.

(4) Records of the monitoring and maintenance program shall be made available to the Texas Commission on Environmental Quality (TCEQ) Executive Director, or designated representative, upon request. Records shall indicate dates, monitoring charts, repairs, and other corrective actions taken on all components in the EtO service.

H. The holder of this permit will physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants. This will include the EPN as listed on the maximum allowable emission rates table.

Demonstration of Continuous Compliance

10. At the request of the Executive Director of the TCEQ, the holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the east abator and from the west abator. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

A. The appropriate TCEQ Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

(1) Date for pretest meeting.

(2) Date sampling will occur.

(3) Name of firm conducting sampling.

(4) Type of sampling equipment to be used.

(5) Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions, or TCEQ, or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in B of this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for 40 CFR Part 60 testing which must have the EPA approval shall be submitted to the TCEQ Regional Office.

B. Air contaminants emitted from the abator stacks to be tested for include (but are not limited to) EtO.

C. Sampling shall occur within 60 days after initial start-up of the facilities and at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Parts 60 and 61 requires the EPA approval, and requests shall be submitted to the TCEQ Regional Office.

D. During stack emission testing, the plant shall operate at production rates and operating parameters determined during the pretest meeting. Primary operating parameters that enable determination of production rate shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting. Additional stack testing may be required when higher production rates are achieved.

E. Two copies of the final sampling report shall be forwarded to the TCEQ within 30 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ San Angelo Regional Office.

One copy to the TCEQ Office of Air, Air Permits Division in Austin

11. The exhaust temperature of the East and West Abators (EPN 6-113 and 6-112) shall be maintained at a minimum of 270□F unless voluntary testing conducted in accordance with this permit demonstrates that the abators can achieve equal to or greater than 99 percent control efficiency of EtO while operating at a lower temperature. The holder of this permit shall maintain copies of all voluntary testing on-site demonstrating a lower minimum temperature in accordance with Recordkeeping Requirements section of this permit. The submittal of copies of these reports demonstrating 99 percent control efficiency of EtO while operating at lower temperatures to the TCEQ is not required.

If the temperature drops below the minimum demonstrated temperature, the affected abator may be bypassed until corrective action has been taken. Such bypassing shall be subject to 30 TAC Chapter 101, Subchapter F. No sterilizing cycle can be started unless there is an effective abator on-line.

12. The holder of this permit shall sample, analyze, and record once per week the ethylene glycol concentration in the scrubber liquor of Scrubbers A/B and C/D (EPN 6-47 and 6-38). The ethylene glycol concentration shall be maintained less than or equal to 50 percent volume per volume of ethylene glycol and water which corresponds to an EtO removal efficiency of 99 percent. Sampling and analysis are required only when a scrubber unit has been operated during the week. If the analysis indicates that the ethylene glycol concentration is greater than 50 percent, the scrubber shall be taken out of service and the standby scrubber shall be activated. No sterilizing cycle shall be started until there is an effective scrubber online.

Recordkeeping Requirements

13. The holder of this permit shall maintain the following records for a period of at least five years and made available on request to representatives from the TCEQ, EPA, or any local air pollution agency having jurisdiction:

    A. All sterilant gas usage on a monthly and rolling 12-month total basis,

    B. Hourly abator temperatures and other abator reporting requirements specified in the Continuous Determination of Compliance section of this permit,

    C. Copies of all voluntary testing demonstrating lower minimum abator temperatures in accordance with the Continuous Determination of Compliance section of this permit,

    D. All records of weekly sampling and analysis of the EtO scrubber solution pH,

    E. All records of the weekly sampling and analysis of the ethylene glycol concentration in the scrubber liquor specified in the Continuous Determination of Compliance section of this permit, and

    F. Records of monitoring and maintenance of Piping, Valves, Flanges, and Pumps in EtO Service.

    G. Records of inspections, malfunctions, repairs, and maintenance of abatement systems (which included the manufacturer's suggested cleaning and maintenance schedule).

DATE: October 3 2013

Emission Sources - Maximum Allowable Emission Rates

Permit Number 20178

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (6)	
			lbs/hour	TPY (4)
6-47	East Scrubbers A/B	EtO	1.09	0.42
6-38	West Scrubbers C/D	EtO	0.97	0.34
6-113	East Abator	EtO	0.01	0.02
6-112	West Abator	EtO	0.01	0.02
6-154	Sterilizer SS-1 DLC (5)	EtO	0.01	<0.01
6-139	Sterilizer SS-2 DLC (5)	EtO	0.01	<0.01
6-75	Sterilizer SS-3 DLC (5)	EtO	0.01	<0.01
6-125	Sterilizer SP-1 DLC (5)	EtO	0.01	<0.01
6-96	Sterilizer SP-2 DLC (5)	EtO	0.01	<0.01
6-87	Sterilizer SP-3 DLC (5)	EtO	0.01	<0.01
6-163	EDF Suites DLC (5)	EtO	0.02	0.01
6-52	East Scrubber A/B DLC (5)	EtO	0.01	0.06
6-43	West Scrubber C/D DLC (5)	EtO	0.01	0.06
6-165	EDF Pump Suite DLC (5)	EtO	0.03	0.11
6-175	Cooling Water Units	VOC	<0.01	<0.01
6-FUG	HVAC Building Exhaust (5)	EtO	0.01	0.06
6-170	2 MMBtu/hr	VOC	0.01	0.05

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (6)	
			lbs/hour	TPY (4)
	West Abator Heater	PM	0.02	0.06
		PM_{10}	0.02	0.06
		$PM_{2.5}$	0.02	0.06
		NO_x	0.20	0.86
		CO	0.17	0.72
		SO_2	<0.01	0.01
6-171	2 MMBtu/hr East Abator Heater	VOC	0.01	0.05
		PM	0.02	0.06
		PM_{10}	0.02	0.06
		$PM_{2.5}$	0.02	0.06
		NO_x	0.20	0.86
		CO	0.17	0.72
		SO_2	<0.01	0.01
6-65	Boiler 6E	NO_x	1.53	0.23
		CO	0.75	0.18
		SO_2	1.92	0.08
		VOC	0.05	0.02
		PM	0.20	0.03
		PM_{10}	0.20	0.03
		$PM_{2.5}$	0.20	0.03

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (6)	
			lbs/hour	TPY (4)
6-31	Boiler 6W	NO_x	2.04	0.31
		CO	1.00	0.24
		SO_2	2.56	0.10
		VOC	0.07	0.03
		PM	0.26	0.03
		PM_{10}	0.26	0.03
		$PM_{2.5}$	0.26	0.03
1-217	Tool & Die Shop	PM	0.03	0.03
		PM_{10}	0.02	0.02
		$PM_{2.5}$	<0.01	<0.01
1-220	Project Vapor Recovery	VOC	1.40	0.21
1-21	Print Shop	VOC	2.46	5.27
1-27	Needles Shop, Parts Washer, Epoxy Ovens, Heat Treating Ovens, and Plasma Oven	VOC	0.33	0.33
1-25	Silicone Mixing Room	VOC	0.38	0.81
		HAP (xylene)	<0.01	0.02
1-29	Machine Shop, Parts Washer, and Welding Booth	VOC	0.08	0.08
		PM	0.05	0.05
		PM_{10}	0.05	0.05
		$PM_{2.5}$	0.05	0.05
Hot Room	Hot Room (5)	EtO	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (6)	
			lbs/hour	TPY (4)
2-1	Maintenance Building, Welding Booth, and Abrasive Blast Cleaning	VOC	0.05	0.05
		PM	0.11	0.15
		PM_{10}	0.08	0.10
		$PM_{2.5}$	0.05	0.05
3-70	Lab Source A	VOC	<0.01	0.03
3-71	Lab Source B	VOC	<0.01	0.03
3-76	Lab Source C	VOC	<0.01	0.03
3-77	Mechanics Shop and Parts Washer	VOC	0.03	0.03
B-43	Boiler 43	NO_x	2.97	0.45
		CO	1.47	0.35
		SO_2	3.73	0.14
		VOC	0.10	0.03
		PM	0.37	0.04
		PM_{10}	0.37	0.04
		$PM_{2.5}$	0.37	0.04
B-44	Boiler 44	NO_x	2.97	0.45
		CO	1.47	0.35
		SO_2	3.73	0.14
		VOC	0.10	0.03
		PM	0.37	0.04
		PM_{10}	0.37	0.04
		$PM_{2.5}$	0.37	0.04

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (6)	
			lbs/hour	TPY (4)
Fugitives	Maintenance Activities and Hand-held Equipment (5)	VOC	0.10	0.10
		PM	0.20	0.20
		PM_{10}	0.20	0.20
		$PM_{2.5}$	0.10	0.10
ETHSA1	25,000 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01
ETHSA7	200 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01
ETHSA8	500 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01
ETHSA9	700 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01
ETHSA10	300 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01
ETHSA11	250 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01
ETHSA12	150 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01
ETHSA13	225 gal Sulfuric Acid Tank	H_2SO_4	<0.01	<0.01
ETHSA14	225 gal Caustic Soda Tank	NaOH	<0.01	<0.01
ETHSA15	55 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01
ETHSA16	169 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01
ETHSA20	6,000 gal Glycol Tank	HAP (ethylene glycol)	<0.01	<0.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates (6)	
			lbs/hour	TPY (4)
ETHSA22	300 gal Distallate Fuel Oil Tank	VOC	<0.01	<0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.
(3) EtO -ethylene oxide
VOC -volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x -total oxides of nitrogen
SO_2 -sulfur dioxide
PM -total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} -total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ -particulate matter equal to or less than 2.5 microns in diameter
CO -carbon monoxide
HAP -hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
H_2SO_4 -sulfuric acid
NaOH -sodium hydroxide
DLC -Damage Limiting Construction
EDF -ethylene oxide Dispensing Facility
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.
(6) Planned startup and shutdown emissions are included. Maintenance activities are not authorized by this permit.

Date: October 3, 2013